International Journal of Pharmacy and Technology, 2016, vol.8, N4, pages 24538-24545

Spatial variability of the particle size of river sediments into western part of the former USSR

Gilyazov A., Kurzhanova A., Mozzherin V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved.Studying of particle size distribution of river sedimentsand alluvial deposits hasgreat importance for modern geomorphology and paleogeography. In the currentwork impact assessmentof such factors as orography, human activities and river water dischargeon the particle size of uspended sediments and bed materials of the rivers into Western part of the former USSR is attempted. The studied area includesthe Baltic countries, Belarus, Ukraine, Moldova, the countries of Transcaucasia, and the European part of Russia. Division into districts of the explored territory on particle size of river deposits is performed. With transition Increase in particle size of the suspended sediments and, especially, bed materials from the plains to mountains is observed. This is associated with increase ofaverage relief height that leads to increase in the transporting ability of the rivers. Due the higher transporting ability rivers carry both small and large material.Human activityaffects particle size of the suspended sediments: the share of the small material which arrives from river basin increases in very intensively used drainage area.Particle size of bed materials poorly depends on extent of transformation of landscapes in river basin. Increase in water discharge leads to reduction of particle size of the suspended sediments and bed materials:thin material formed by processes of soil and gully erosion transports to river network. Use of cluster analysis allows receiving evident spatial distribution of particle size of modern river deposits.

Keywords

Bed materials, Suspended sediments, The factor analysis, The spatial analysis, The territory of the USSR